TRAINING PROGRAM OF INSTRUCTION (TPI)

FOR

DINFOS-DMC

DIGITAL MULTIMEDIA COURSE

Approved by:

//Bell//

Hiram Bell, Jr.
Colonel, U.S. Army
Commandant
Defense Information School

Approval Date: 25 October 2005

Supersedes DMC TPI dated 19 February 2004

DIGITAL MULTIMEDIA COURSE
TRAINING PROGRAM OF INSTRUCTION

Table of Contents

TRAINING PROGRAM OF INSTRUCTION

Preface

TRAINING PROGRAM OF INSTRUCTION FILE NUMBER (TPFN): DINFOS-DMC

TITLE: Digital Multimedia Course

TRAINING LOCATION: Defense Information School, Fort George G. Meade, Maryland

SPECIALTY AWARDED: USN: NEC 8193, Electronic Imaging Specialist

PURPOSE: To train selected officer/enlisted personnel and civilian employees of the Department of Defense in the principles, techniques, and skills required to perform the duties and functions of a digital multimedia technician.

COURSE DESCRIPTION: The Digital Multimedia Course (DMC) provides training in the knowledge and skills needed to create and integrate text, graphics, sound, animation and full-motion video into multimedia and web-based packages. The course includes instruction in the operation of computer systems, input devices and output devices to acquire, enhance, design, manage, output, and archive digital imaging, graphic design and multimedia files. Students use software to create, manage and render the following: composite photographic layouts, graphic designs, page layouts, video productions, web pages and interactive multimedia solutions. The Digital Multimedia Course also includes theoretical and working instruction of computer fundamentals and functions, troubleshooting, networking, communications, color theory, and the principles and implementation of color management. DoD policies and instructions relative to ethics and use of computer generated and altered images are emphasized.

PREREQUISITES: This course is open to DoD military and civilian personnel currently involved in daily operations in the Visual Information (VI) career fields. VI personnel who have not attended their respective training; the Basic Still Photographer's Course (BSP) since Oct. 2002, the Basic Multimedia Illustrator's Course (BMIC, BGR) since Oct. 1999 or the Electronic Imaging Course (EIC) since Oct. 1995 should submit a waiver request demonstrating sufficient knowledge to be successful in the Digital Multimedia Course (DMC). Sufficient knowledge is defined as two years of computer experience including operational skills in at least two of the following types of software: image editing, illustration, web design, authoring, non-linear video editing, or page layout.

USA: E-4 through E-7 (PA - 46Q; VI - 25M, 25V, 25Z); Civilians GS-07-11 (Series 1001, 1020, 1035, 1060, 1071,1084)

USAF: E-4 through E-7 (3V0xx); Civilians GS-05 through GS-09 (Series 107XX) USAF personnel must be assigned to VDM position or request waiver through Majcom and Air Force Career Field Manger to attend course. Attendees that do not obtain a legitimate training line number will not be given credit for attending this course

USN: E-3 through E-7 HM (8472), JO, PH, DM, LI, - E-7 less than 16 years
        Officer - O-1 through O-3 VI: 647X, Civilians GS-5 through
        GS-11 (Series 1082, 1084, 1060, 1001, 1071, 1035, 1020)
USMC: E-4 through E-9 (PA); E-3 through E-7 (VI); Civilians GS -11 (PA Series
        1035, VI Series 1001, 1081)
USCG: E-4 through E-7; Civilians (Series 1035)
NGIA: National Geospacial Intelligence Agency (formally NIMA): E-4 through E-9;
        Officer O-1 through O-4; Civilians: as determined by agency

International students: English Comprehension Level (ECL) of 80; suggest individual have at least one year of experience in computer operations to include the following: computer setup, mouse control, use of peripheral devices, file system navigation, file management, and basic file creation. Must be in a career field/position with pay grades equivalent to Army E4, officer O-1, or civilian GS-5 or above. Must have distance visual acuity correctable to 20/20, and have normal color vision.

SECURITY CLEARANCE: None

CLASS SIZE:

MAXIMUM	18	
MINIMUM	12	
ANNUAL COURSE CAP	108	

COURSE LENGTH: 33 Days

ACADEMIC HOURS:	258 hrs
ADMINISTRATIVE HOURS:	6 hrs
TOTAL COURSE HOURS:	264 hrs

INSTRUCTOR CONTACT HOURS: 720 hrs

TYPE/METHOD OF INSTRUCTION:

1. Lecture (L)   50 hrs

2. Performance Exercise (PE)   124 hrs

3. Demonstration (D)   49 hrs

4. Examination (E)   37 hrs

Performance Examination (EP)   29 hrs

Written Examination (EW)   4 hrs

5. Administrative Hours (AD)   6 hrs

TRAINING START DATE: October 2005

ENVIRONMENTAL IMPACT: None. DoD policy was followed to assess the environmental impact.

MANPOWER: The Interservice Training Review Organization (ITRO) formula was used to determine the number of instructors required.

EQUIPMENT AND FACILITIES: The Course Design Resource Estimate (CDRE) contains this information.

TRAINING DEVELOPMENT PROPONENT: Defense Information School, Course Development Division, 301 677-3273; DSN 622-3273

FUNCTIONAL AREA 1
COMPUTER FUNDAMENTALS

TPFN: DINFOS-DMC-001-001-

UNIT TITLE: Workstation Familiarization

TPFN HOURS AND TYPE: 3L

TPFN TOTAL HOURS: 3

PREREQUISITE TPFN: None

TASK(S):   001   Identify and define safety precautions for working with electronic imaging systems.
        002   List hardware component fundamentals.
        003   List operating system fundamentals.
        004   Discuss troubleshooting techniques necessary to correct computer malfunctions and preventive maintenance.
        005   Discuss diagnostic resources necessary to detect the cause of software malfunctions.

SUMMARY OF INSTRUCTION: Students are given an overview of safety precautions to observe when working with electronic imaging systems to include the identification of electrical hazards, the primary causes of eye strain and carpal tunnel syndrome, and issues associated with the presence of food and drink. Students will discuss various types of CPUs, hardware and computer operating systems along with how different types of memory, buses, storage devices; and display monitors are configured for use on typical electronic imaging workstations. Discussion will also include how to recognize common problems, various hardware and software troubleshooting techniques; and how to improve performance associated with electronic imaging workstations.

REFERENCES: DINFOS-DMC Student Guide; *Troubleshooting the Mac Workbook*, Data-Tech Institute; DINFOS Policies and Procedures Manual (POPMAN); *How Computers Work*, Ziff Davis; *How Mac's Work*, Ziff Davis; Memory.com web page, http://www.memory.com; *Troubleshooting the Mac Workbook,* Data-Tech Institute; Norton Utilities for Macintosh Users; Computer Emergency Response Team web page, http://www.cert.mil

INSTRUCTOR/STUDENT RATIO: 1:9(L)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 1
COMPUTER FUNDAMENTALS

TPFN: DINFOS-DMC-001-002-

UNIT TITLE: Communications

TPFN HOURS AND TYPE: 2L

TPFN TOTAL HOURS: 2

PREREQUISITE TPFN: DINFOS-DMC-001-001-

TASK(S):   001   Discuss various methods to send files (e.g., FTP, dial-up, point to point, email).
          002   Discuss modem configuration issues concerning dial-up point to point connections.
          003   Discuss various remote delivery methods to send files (e.g., FTP, email).
          004   Discuss security concerns regarding transmission of imagery over unsecured lines.

SUMMARY OF INSTRUCTION: Students discuss various methods to send and receive computer-based files. Students discuss the concepts behind point to point connections, file transfer protocol (FTP), dial-up connections and factors that influence the performance of modems, the use of e-mail and the Internet as transferring systems, and security concerns related to the transmission of files over unsecured networks.

REFERENCES: DINFOS-DMC Student Guide; *Internet,* Infostreet Inc.

INSTRUCTOR/STUDENT RATIO: 1:9 (L)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 1
COMPUTER FUNDAMENTALS

TPFN: DINFOS-DMC-001-003-

UNIT TITLE: Ethics and Policies

TPFN HOURS AND TYPE: 1L

TPFN TOTAL HOURS: 1

PREREQUISITE TPFN: DINFOS-DMC-001-002-

TASK(S):

	001	Select statements that best describe image enhancement and image manipulation.
	002	Identify and define DoD policies, guidelines, and ethical standards required when using electronic imaging processes.
	003	Identify and define copyrights and other legal issues affected by electronic imaging processes.

SUMMARY OF INSTRUCTION: Information presented in this unit is critical to the effectiveness and trustworthiness of DoD Imagery released through both internal and external communications channels. At the conclusion of the unit, students will be able to differentiate between image enhancement and image manipulation and how each fall under the realm of current DoD policies. Students identify acceptable and prohibited practices while discussing examples both civilian and military sources. Students are also presented information pertaining to copyrights.

REFERENCES: DINFOS-DMC Student Guide; DoD Directive 5040.5, Alteration of Official DoD Imagery

INSTRUCTOR/STUDENT RATIO: 1:9(L)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 2
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-002-001-

UNIT TITLE: Digital Cameras

TPFN HOURS AND TYPE: 3L, 1D, 4PE

TPFN TOTAL HOURS: 8

PREREQUISITE TPFN: DINFOS-DMC-001-003-

TASK(S):   001   Identify and define statements that describe the characteristics
                          and principles of digital cameras.
                 002   Shoot digital images using a digital camera kit.
                 003   Transfer and manage images using a computer workstation and
                          image editing software.
                 004   Identify color theory as it relates to electronic imaging.
                 005   Identify color models as they relate to electronic imaging.

SUMMARY OF INSTRUCTION: Students are presented with an overview of digital camera systems. Upon completion of this unit, students can discuss the functions of a charged couple device (CCD), various storage media used with a digital camera, the differences between a traditional and a digital camera, differences between traditional and digital flash photography, and various controls of both camera body and flash units. Students will be presented with basic exposure and camera operation information. Students will then use the presented knowledge by taking part in multiple shooting assignments. The imagery from these assignments will be used in future course tasks. Students will use procedures for downloading information from the camera and storage media into a computer workstation.

REFERENCES: DINFOS-DMC Student Guide; Nikon D1H User Manual; Web Site: *http://www.dpreview.com;* Nikon View 4 Software Manual

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 2
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-002-002-

UNIT TITLE: Output Devices

TPFN HOURS AND TYPE: 2L, 2PE

TPFN TOTAL HOURS: 4

PREREQUISITE TPFN: DINFOS-DMC-002-001-

TASK(S):   001   Identify and define the characteristics and principles of output devices.
               002   Identify and define procedures associated with the output of digital files associated with the offset printing process.
               003   Output digital images to a writeable DVD and CD ROM recorder in accordance with established procedures and using a computer workstation.
               004   Discuss cross-platform compatibility issues.

SUMMARY OF INSTRUCTION: Students are given an overview of various printer technologies and their applications in military imaging environments. Discussions include identifying various types of output devices and how they differ in operation, effects of image resolution on output, explaining the concept of halftone screens, and the creation of negatives and plates and how they are used in the offset printing process. Students are provided further instruction into procedures for creating CD-ROM's and the importance of cross-platform compatibility by discussing file formats and naming conventions for different operating systems. At the conclusion of the course, students will create a CD-ROM.

REFERENCES: DINFOS-DMC Student Guide; *Graphic Workbook*, Mac Academy; CD ROM Recorder User Manual; HP720 Plotter User Manual; Encad Pro 42e User Manual; Accuprint Software User Manual.

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 2
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-002-003-

UNIT TITLE: Color Theory

TPFN HOURS AND TYPE: 3L

TPFN TOTAL HOURS: 3

PREREQUISITE TPFN: DINFOS-DMC-002-002-

TASK(S):   001   Define color theory as it relates to electronic imaging.
                  002   Identify color models as they relate to electronic imaging.

SUMMARY OF INSTRUCTION: Students are presented an overview of color theory. Discussions pertaining to color models as they relate to input and output are held. The RGB color model is explored for how color is created by input, output and photographic processes. The CMYK color model is examined for how it creates color for certain types of output and why it is not used in other arenas. Discussions further describe the components of presented color models and how the models relate to one another and to the CIE color model.

REFERENCES: DINFOS-DMC Student Guide; *Understanding Desktop Color*, 2nd Edition, Kiernan; Kodak Colorflow ICC Profile Tools Training Manual; Kodak Colorflow Profile Editor Manuals

INSTRUCTOR/STUDENT RATIO: 1:9(L)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 2
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-002-004-

UNIT TITLE: Color Calibration

TPFN HOURS AND TYPE: 2L, 5D, 6PE

TPFN TOTAL HOURS: 13

PREREQUISITE TPFN: DINFOS-DMC-002-003-

TASK(S):   001   Define color calibration and characterization as it relates to electronic imaging.
                      002   Identify, define and apply procedures associated with the color calibration and characterization of color monitors, scanners, and output devices.
                      003   Apply color management principles as they relate to electronic imaging.

SUMMARY OF INSTRUCTION: Students are presented with an overview of procedures associated with the calibration and characterization of computer monitors, scanners, digital cameras and output devices. Students will then apply these procedures using color management hardware and software. Students will also apply color management profiles and color working spaces to images in order to maintain color integrity from image acquisition to output.

REFERENCES: DINFOS-DMC Student Guide; *Understanding Desktop Color*, 2nd Edition, Kiernan; Kodak Colorflow ICC Profile Tools Training Manual; Kodak Colorflow Profile Editor Manuals

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 2
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-002-005-

UNIT TITLE: Digital Image Input / Output Measurement

TPFN HOURS AND TYPE: 3EP

TPFN TOTAL HOURS: 3

PREREQUISITE TPFN: DINFOS-DMC-002-004-

TASK(S):   001   Apply input / output principles.

SUMMARY OF INSTRUCTION: This unit serves to measure the student's comprehension of material covered in this functional area. A minimum score of 70% on a written examination and a minimum score of 70% on a performance examination are required before the student may progress to further functional areas.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:9(EW), 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 3
ARCHIVING

TPFN: DINFOS-DMC-003-001

UNIT TITLE: Archives

TPFN HOURS AND TYPE: 3L, 1D, 4PE

TPFN TOTAL HOURS: 8

PREREQUISITE TPFN: DINFOS-DMC-002-005-

TASK(S):   001   Identify and define the characteristics and principles of archive techniques.
                   002   Edit, organize, and archive electronic imaging products.
                   003   Discuss Joint Combat Camera Center requirements and standards for electronic image submission.
                   004   Describe various methods of transferring digital imagery.

SUMMARY OF INSTRUCTION: Students will discuss and apply the principles and procedures associated with archiving computer based files. Students will discuss and then apply procedures associated with the following topics: defining the purposes for archiving, identifying items to be archived, understanding the processes involved in building a catalog, identifying the components of a well written caption, standards for submitting imagery to the Joint Combat Camera Center, procedures associated with creating a VIRIN, how to use the IPTC header data of various file formats, and methods associated with transferring files.

REFERENCES: DINFOS-DMC Student Guide; Joint Combat Camera Center (JCCC) Web Page: www.dodimagery.afis.osd.mil; *Extensis Portfolio*; *MediaGrid,* Software Construction Company; *Cumulus,* Canto Software Inc.

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 4
GRAPHIC DESIGN

TPFN: DINFOS-DMC-004-001-

UNIT TITLE: Graphic Design

TPFN HOURS AND TYPE: 11L, 7D, 14PE

TPFN TOTAL HOURS: 32

PREREQUISITE TPFN: DINFOS-DMC-002-005-

TASK(S):   001   Discuss basic illustration software tools and techniques.
                 002   Perform basic illustration techniques using illustration software.
                 003   Create digital images using advanced graphic design techniques.
                 004   Using advanced graphic design techniques, explain the concept of
                         image perspective transformation (IPT).
                 005   Using advanced graphic design techniques, create technical illustrations.
                 006   Discuss advanced graphic design techniques, as related to 3-D
                         illustrations.

SUMMARY OF INSTRUCTION: Students are given an overview of graphic design software and techniques used to create graphics to be used independently or as an enhancement to a digital image. Students will discuss and use procedures associated with the following: creating and selecting paths, coloring paths, transforming elements, creating text, using layers, creating groups of elements, applying blends between paths, creating technical drawings, creating three dimensional objects using perspective and the principles of IPT, applying depth to an illustration, and how to use established composition rules. Students will produce several illustrations to demonstrate competency with material presented in this unit.

REFERENCES: DINFOS-DMC Student Guide; *MacWorld Illustrator 9.0 Bible*, Alspach; *Visual Quickstart Guide for Illustrator 9.0*, Weinmann and Lourekas; *Adobe Illustrator Classroom in a Book*

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 4
GRAPHIC DESIGN

TPFN: DINFOS-DMC-004-002-

UNIT TITLE: Graphic Design Measurement

TPFN HOURS AND TYPE: 2EP

TPFN TOTAL HOURS: 2

PREREQUISITE TPFN: DINFOS-DMC-004-001-

TASK(S):   001   Apply graphic design principles.

SUMMARY OF INSTRUCTION: This unit serves to measure the student's comprehension of material covered in this functional area. A minimum score of 70% on a written examination and a minimum score of 70% on a performance examination are required before the student may progress to further functional areas.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:9(EW), 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 5
RASTER BASED IMAGES

TPFN: DINFOS-DMC-005-001-

UNIT TITLE: Electronic Image Editing Techniques

TPFN HOURS AND TYPE: 6L, 8D, 21PE

TPFN TOTAL HOURS: 35

PREREQUISITE TPFN: DINFOS-DMC-002-005-

TASK(S):   001   Discuss functions and operations of image enhancement software.
                 002   Use basic photo editing tools and techniques.
                 003   Discuss various types of compression techniques to include Lossy
                         and Loss-Less compression formats.
                 004   Use various compression formats.
                 005   Identify and define advanced editing techniques used to enhance
                         digital images.
                 006   Create composite images using layers.
                 007   Use advanced editing techniques to enhance images using masks.
                 008   Use advanced color correction.
                 009   Acquire, crop, enhance, resize, and output digitally scanned images
                         with film and flatbed scanners in accordance with established procedures
                         using a computer workstation and image editing software.

SUMMARY OF INSTRUCTION: Students are presented an overview of the functions and operations of image enhancement software and the applications of this type of software in the military imaging environment. Upon completion of this unit, students will be able to accomplish the following: describe the two primary tasks of image enhancement software, describe a pixel and its role in a digital image, discuss how channels affect the color of a displayed pixel, use various methods for selecting, moving, transforming, and painting pixels, use methods to apply text to an image, discuss and use various compression formats for saving image files, use layers and their associated constructs to create composite images, use masks to create stored alpha channels, use actions and batch processing to automate image enhancement procedures, and apply basic and advanced color correction methods using various color models, adjustment tools and channels. Students are also given an overview of desktop scanner technologies and the application of these devices in military imaging environments. Classroom discussion includes the capabilities and limitations of various types of scanners, a detailed investigation of resolutions and how scanning resolution impacts the final output, how dynamic range influences image quality, and procedures for producing optimum results from a scanned image.

REFERENCES: DINFOS-DMC Student Guide; *Mac World Photoshop 6 Bible*, McClelland; *Photoshop Artistry*, Hanes and Crumpler; *Professional Photoshop,* Morgulis; *Adobe Photoshop*

Classroom in a Book; *Graphic Workbook*, MacAcademy; Flatbed Scanner User Manual; Film Scanner User Manual.

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 5
RASTER BASED IMAGES

TPFN: DINFOS-DMC-005-002-

UNIT TITLE: Raster Based Image Measurement

TPFN HOURS AND TYPE: 3EP

TPFN TOTAL HOURS: 3

PREREQUISITE TPFN: DINFOS-DMC-004-002-

TASK(S):   001   Apply Raster Based Imaging Principles.

SUMMARY OF INSTRUCTION: This unit serves to measure the student's comprehension of material covered in this functional area. A minimum score of 70% on a written examination and a minimum score of 70% on a performance examination are required before the student may progress to further functional areas.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:9(EW), 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 6
PAGE LAYOUT

TPFN: DINFOS-DMC-006-001-

UNIT TITLE: Page Layout

TPFN HOURS AND TYPE: 3L, 6D, 16PE

TPFN TOTAL HOURS: 25

PREREQUISITE TPFN: DINFOS-DMC-004-002- / DINFOS-DMC-005-002-

TASK(S):
001 Describe the characteristics of page layout software.
002 Create a typical photo story layout using page layout software.
003 Identify and define advanced layout and design concepts.
004 Create a multi-page document using advanced layout and design techniques.

SUMMARY OF INSTRUCTION: Students are presented with an overview of page layout software. Classroom discussion consists of the following: identifying various types of page elements, methods for producing grids, understanding the uses of and methods for creating master pages, methods for defining styles, methods associated with creating photo stories, applying compositional rules to layout elements, applying colors to various page elements, techniques used to create table of contents and indexes, methods for combining multiple documents together, and techniques to create a PDF. Students will create multiple page layouts applying the afore mentioned methodologies.

REFERENCES: DINFOS-DMC Student Guide; *Macworld Pagemaker 6.5 Bible*, Harrel and Danuluff; *Graphic Workbook*, MacAcademy; *Adobe Pagemaker Classroom in a Book*; *Pagemaker 6.5 Video Training Series*, Macademy.

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 6
PAGE LAYOUT

TPFN: DINFOS-DMC-006-002-

UNIT TITLE: Page Layout Measurement

TPFN HOURS AND TYPE: 2EW, 3EP

TPFN TOTAL HOURS: 5

PREREQUISITE TPFN: DINFOS-DMC-006-001-

TASK(S):   001   Mid-course examination and critique.
                 002   Apply page layout principles.

SUMMARY OF INSTRUCTION: This unit serves to measure the student's comprehension of material covered in this functional area. A minimum score of 70% on a written examination and a minimum score of 70% on a performance examination are required before the student may progress to further functional areas.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:9(EW), 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 7
DIGITAL VIDEO

TPFN: DINFOS-DMC-007-001-

UNIT TITLE: Video Source

TPFN HOURS AND TYPE: 3L, 5D, 13PE

TPFN TOTAL HOURS: 21

PREREQUISITE TPFN: DINFOS-DMC-002-005-

TASK(S):   001   Identify and define principles and characteristics of acquisition and
                                             editing of digital video images.
                            002   Edit digital video images.
                            003   Discuss and define basic principles of videography.

SUMMARY OF INSTRUCTION: Students are presented with an overview of videography
and video editing software. Students discuss the differences between linear and non-linear
video, basic videography concepts, concepts behind storyboarding, procedures for capturing
audio and video, methods for importing clips into a video editing application, various procedures
for editing audio and video clips, procedures for creating titles, and various file formats for
exporting edited movies. Students then apply these techniques to create a movie which can be
used in a multitude of applications.

REFERENCES: DINFOS-DMC Student Guide; *Adobe Premiere Classroom in a Book; Adobe
Premiere Bible,* Droblas and Greeberg*; Adobe Premiere Users Guide,* Adobe Systems Inc.

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal
Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 7
DIGITAL VIDEO

TPFN: DINFOS-DMC-007-002-

UNIT TITLE: Digital Video Measurement

TPFN HOURS AND TYPE: 2EP

TPFN TOTAL HOURS: 2

PREREQUISITE TPFN: DINFOS-DMC-007-001-

TASK(S):   001   Apply digital video principles.

SUMMARY OF INSTRUCTION: This unit serves to measure the student's comprehension of material covered in this functional area. A minimum score of 70% on a written examination and a minimum score of 70% on a performance examination are required before the student may progress to further functional areas.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:9(EW), 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 8
<u>MULTIMEDIA</u>

TPFN: DINFOS-DMC-008-001-

UNIT TITLE: Advanced Multimedia Techniques

TPFN HOURS AND TYPE: 3L, 9D, 25PE

TPFN TOTAL HOURS: 37

PREREQUISITE TPFN: DINFOS-DMC-004-002- / DINFOS-DMC-005-002- / DINFOS-DMC-007-002-

TASK(S):   001   Identify and define the characteristics of software and principles of multimedia concepts.
          002   Using advanced multimedia techniques, create an interactive production.

SUMMARY OF INSTRUCTION: Students are given an overview of multimedia software. Classroom discussion includes identifying the stages of multimedia authoring, identifying various components of a timeline, explaining procedures for creating animation, understanding the functions of a cast, explaining how to create navigation, and methods for publishing a completed work. Students apply these concepts to create interactive presentations.

REFERENCES: DINFOS-DMC Student Guide; *Graphic Workbook*, Macademy; *Computer Workbook*, Macademy; *Director 8 and Lingo Bible*, DG Books

INSTRUCTOR/STUDENT RATIO: 1:9(L);1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 8
MULTIMEDIA

TPFN: DINFOS-DMC-008-002-

UNIT TITLE: Multimedia Measurement

TPFN HOURS AND TYPE: 2EP

TPFN TOTAL HOURS: 2

PREREQUISITE TPFN: DINFOS-DMC-008-001-

TASK(S):   001   Apply multimedia principles.

SUMMARY OF INSTRUCTION: This unit serves to measure the student's comprehension of material covered in this functional area. A minimum score of 70% on a written examination and a minimum score of 70% on a performance examination are required before the student may progress to further functional areas.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:9(EW), 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 9
WEB SITE DESIGN

TPFN: DINFOS-DMC-009-001-

UNIT TITLE: Web Design

TPFN HOURS AND TYPE: 5L, 7D, 19PE

TPFN TOTAL HOURS: 31

PREREQUISITE TPFN: DINFOS-DMC-003-002- / DINFOS-DMC-006-002- / DINFOS-DMC-008-002-

TASK(S):   001   Identify and define the characteristics and principles of a web page and web site design; file and media management and image optimization.
002   Discuss the use of a network file server in accordance with established procedures using a computer workstation with Internet access.
003   Identify Section 508/WC3 standards.
004   Create and manage a web site.
005   Perform action/batch processing.

SUMMARY OF INSTRUCTION: Students are presented an overview of the Internet and technologies that the Internet employs. Students discuss and use storyboards to illustrate the importance of file management in the creation and management of a web site. Discussion will also include the various file types supported by the web browsers; how HTML works and about basic HTML tags. Each student will use software to learn how to create a
web site and pages containing various types of links, how to format pages using tables and frames, how to control design of a site using templates and style sheets; how to enhance and optimize a site using different types of graphic and multimedia files; and how to create a basic form page. Students learn various methods of publishing a web site to a web server.

REFERENCES: DINFOS-DMC Student Guide; Macromedia Dreamweaver Users Guide; *The Little Web Book*, Glossbrenner and Glossbrenner; *Visual Quickstart Guide on HTML*, 2nd Edition, Castro; *Visual Quickstart Guide on Javascript*, Gesing and Schneider; *Elements of Web Page Design*, Dinucci, Giudice and Stiles

INSTRUCTOR/STUDENT RATIO: 1:9(L); 1:6(D, PE)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 9
WEB SITE DESIGN

TPFN: DINFOS-DMC-009-002-

UNIT TITLE: Web Site Design Measurement

TPFN HOURS AND TYPE: 2EW, 2EP

TPFN TOTAL HOURS: 4

PREREQUISITE TPFN: DINFOS-DMC-009-001-

TASK(S):   001   Final examination and critique.
                 002   Apply web site design principles.

SUMMARY OF INSTRUCTION: This unit serves to measure the student's comprehension of material covered in this functional area. A minimum score of 70% on a written examination and a minimum score of 70% on a performance examination are required before the student may progress to further functional areas.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:9(EW), 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 10
PERFORMANCE TEST

TPFN: DINFOS-DMC-010-001-

UNIT TITLE: Final Project

TPFN HOURS AND TYPE: 12EP

TPFN TOTAL HOURS: 12

PREREQUISITE TPFN: DINFOS-DMC-009-002-002

TASK(S):   001   Create a web site.
             002   Create a poster.
             003   Create an interactive multimedia presentation.
             004   Create a CD-ROM/DVD cover.

SUMMARY OF INSTRUCTION: Students are divided into four teams. Each team will produce one of the following: a web site, a poster, a multimedia presentation, or a CD-ROM cover. These tasks will involve the use of digital camera, image editing, graphic design, page layout, video editing, multimedia authoring, archiving, and other techniques presented throughout the course of instruction. A minimum composite grade of 70% is required on the project.

REFERENCES: All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:6(EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause Carpal Tunnel Syndrome and / or eyestrain.

FUNCTIONAL AREA 11
COURSE ADMINISTRATION

TPFN: DINFOS-DMC-011-001-

UNIT TITLE: Administration

TPFN HOURS AND TYPE: 6AD

TPFN TOTAL HOURS: 6

PREREQUISITE TPFN: N/A

TASK(S):   001   In processing/Orientation.
               002   Critique
               003   Out processing.
               004   Graduation.

SUMMARY OF INSTRUCTION: Self-explanatory.

REFERENCES: DINFOS Policy and Operational Procedures Manual

INSTRUCTOR/STUDENT RATIO: 1:18(AD)

SAFETY FACTORS: N/A